

REMARKS

Applicants request favorable reconsideration and withdrawal of the rejections set forth in the above-noted Office Action in view of the foregoing amendments and following remarks.

Claims 20-22 remain pending, with claim 20 being the only independent claim. Claim 20 have been amended. Support for the amendments can be found throughout the originally-filed disclosure. Accordingly, Applicants submit that the amendments do not include new matter.

Claim 20 is rejected in the Office Action under 35 U.S.C. § 112. Specifically, the Office Action asserts that there is no antecedent basis for the recitation of “on the same layer” and “on the layer,” and that these phrases are confusing. In this regard, the Office Action asserts that the insulating layer and the conductive layer are “in the same plane within a layer,” but not “on the same layer.”

In response, Applicants have clarified the claim language, by reciting how the insulated and conductive patterns form first and second layers. Applicants submit that the amended claim language includes a proper antecedent basis for all of the terms, and would be readily understood by one of ordinary skill in the art in view of the disclosure of the application. Accordingly, Applicants submit that the Section 112 rejection has been overcome.

Claims 20-22 are rejected in the Office Action under 35 U.S.C. § 103(a) as being unpatentable over Japanese Patent Pub. No. 11-163499 (hereinafter “Miyasato et al.”).

Applicants respectfully traverse this art rejection, and submit that the claimed invention is patentably distinguishable from the cited reference for at least the following reasons.

As an initial point, Applicants note that Miyasato et al. fails to disclose the distinctly recited first, second, third, and fourth steps in independent claim 20. That is, Miyasato et al. does not disclose the steps of the present invention that include the separate formation of a conductive pattern step and an insulated pattern, in a sequential order, as recited in independent claim 20.

In formulating the rejection, the Office Action acknowledges that Miyasato et al. discloses forming insulator and conductor patterns simultaneously, and as such, that such the process of Miyasato et al. does not anticipate the claimed invention. Nevertheless, the Office Action appears to assert that it would have been obvious to one of ordinary skill in the art to modify the method of Miyasato et al. to include the separate steps of the claimed invention on the basis of case law. Specifically, the Office Action cites In re Tatinculoux, 108 USPQ 125, for the proposition that “no invention is involved in the broad concept of performing simultaneously operations which have previously been performed in sequence or vice versa,” and Ex parte Rubin, 128 USPQ 440 (Bd. Pat. App. 1959) for the proposition that the transposition of process steps or the splitting of one step into two, where the processes are substantially identical or equivalent in terms of function, manner, and result, does not patentably distinguish the process.

Applicant respectfully traverses the logic and basis of the rejection in view of Miyasato et al. on several grounds.

Initially, Applicant submits that Office Action's own acknowledgement that Miyasato et al. discloses simultaneously forming insulator and conductor patterns undermines the obviousness rejection. Miyasato et al. expressly discloses that the whole point of the invention disclosed therein, i.e., the "problem to be solved," is reducing cost and time of the process, which is achieved by the simultaneous formation the conductor and insulator patterns. See Abstract provided with the July 16, 2009 Office Action. Thus, simultaneous forming of the conductor and insulator is a principle operation of the reference in Miyasato et al. And in this regard, a proposed modification of a reference that changes a principle operation of the reference is not sufficient to render the claims prima facie obvious. In re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959); MPEP § 2143.01. The rejection, however, does precisely this: it concludes that it would be obvious to one of ordinary skill in the art to modify the teachings of Miyasato et al. as such to perform separate steps of forming the insulator and conductor patterns despite the references own unequivocal teaching the simultaneous forming of the insulator and conductor patterns is the principle of the invention that solves problems in the art.

Applicants further respectfully submit the Office Action's reliance on In re Tatinculoux and Ex parte Rubin is insufficient to show obvious of the claimed invention in view of Miyasato et al.

Initially, Applicants submit that the Office Action's citation of In re Tatinculoux for a rule that there is no invention is involved in the broad concept of performing simultaneously operations which have previously been performed in sequence "*or vice versa*" is inaccurate. In re Tatinculoux says nothing of the "vice versa" asserted in the Office Action. In the case, the court merely stated that "[a]s a general rule, no invention is involved in the broad concept

of performing simultaneously operations which have previously been performed in sequence.” 108 USPQ at 128. The court then applied the general rule to the facts specific to that case which involved the making of bricks. See, e.g., 108 USPQ at 127. Thus, In re Tatinculoux is different from the present application both in the rule used to show obviousness, as well as the facts specific to the case. Moreover, as the In re Tatinculoux court expressly stated, the rule of the case was only a “general rule,” not a per se bar to patentability. As noted above, the present rejection ignores other case law more on point that an obviousness rejection should not require the changing of a principal operation of the reference. Thus, the “general rule” of In re Tatinculoux cannot be applied in the present case to demonstrate the obviousness of the claimed invention in view of Miyasato et al.

With respect to Ex parte Rubin, Applicants also respectfully traverse the Office Action’s interpretation of this case. The Office Action asserts that the case can be taken for the proposition that the transposition of process steps or the splitting of one step into two, where the processes are substantially identical or equivalent in terms of function manner, and result, does not patentability distinguish the process. Applicants submit, however, that the court in Ex parte Rubin merely stated that the “appellant has not attempted to refute the examiner’s position that it is not inventive to change the order of steps [of a process].” 128 USPQ at 441. Importantly, in affirming the Examiner’s rejection, the court further noted that the “appellant concedes that the same product is obtained by either the method claimed herein or that claimed in the patent [cited in the rejection].” *Id.*

Thus, the rejection in Ex parte Rubin is plainly different than the present application. The present rejection does not amount to merely reordering of known steps, because, as noted

above, Miyasato et al. does not disclose the steps of the present invention that include the formation of a conductive pattern step and an insulated pattern separately in the first place.

Moreover, Applicants do not concede that the process of Miyasato et al. results in the same product as the present invention. In fact, they are quite different. In the present invention, an insulated pattern is first formed and then a conductive pattern is formed so as to form a first layer. Thus, the insulated pattern works as an insulating edge to thereby prevent expansion of the conductive pattern formed later, so that a short-circuit of the wiring can be prevented. Further, another conductive pattern is first formed on the conductive pattern of the first layer, and then another insulated pattern is formed. That is, since the conductive pattern of the first layer and the conductive pattern of the second layer are first connected and only thereafter the insulated pattern is formed, the electric connection between the first and second layers is securely conducted. The simultaneous formation of the insulating and conductive patterns in Miyasato et al. simply cannot provide such insulating edges and secure electrical connection.

Thus, Miyasato et al. does not disclose or suggest the separately claimed steps whereby the insulating and conductive patterns are formed, and Applicants submit that the process of the Miyasato et al. cannot be said to result in the same product. As such, the logic of Ex parte Rubin fails to show that the claimed invention would have been obvious to one of ordinary skill in the art in view of Miyasato et al.

Accordingly, for at least the foregoing reasons, Applicants submit that the cited reference to Miyasato et al. alone, or in view of the cited case law, fail to disclose or suggest the claimed invention.

Applicants submit that the present application is in condition for allowance. Favorable reconsideration, withdrawal of the rejection set forth in the Office Action, and a Notice of Allowability are requested.

Applicants' undersigned attorney may be reached in our Washington, D.C. Office by telephone at (202) 530-1010. All correspondence should continue to be directed to our address listed below.

Respectfully submitted,

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